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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,633	01/10/2002	Akio Kobayashi	111632	6574

25944 7590 07/07/2005

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EXAMINER

BERTOGLIO, VALARIE E

ART UNIT PAPER NUMBER

1632

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/041,633	KOBAYASHI ET AL.	
	Examiner	Art Unit	
	Valarie Bertoglio	1632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-10,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-10,13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/05 02/05</u> | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

Applicant's amendment filed 04/81/2005 has been entered. No claim amendments or cancellations were made. Claims 1,2,5-10,13 and 14 are pending and under consideration in the instant office action.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1,2,5-10,13 and 14 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Abela (1996, USPN 5,586,982;IDS) in view of Henriksen (1997, Eur. J. Physiol., Vol. 433, pages 832-841, IDS) and further in view of Beeh (1971, US 3,573,456) and further in view of Rink (1996, USPN 5,498,260) and further in view of Matsuura (1998, Optics Letters, Vol. 23, pages 1226-1228).

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Applicants' arguments have been thoroughly considered and are not found persuasive. The rejection is maintained for reasons of record set forth on pages 3-6 of the office action mailed 01/21/2005.

Abela taught the claimed method using an optical fiber laser comprising many of the design limitations of the claims. Henriksen taught a laser similar to that of Abela. Neither Abela nor Henriksen specifically taught use of a quartz glass chip to converge the laser through, did not teach a hollow waveguide or coating the hollow waveguide with metal. These design limitations are general features of lasers taught in the art as set forth in the office action dated 01/21/2005.

Applicant has argued that Beeh, relied upon for teaching use of the quartz tip, is non-analogous art that does not apply to the instant invention because the laser of Beeh had a very different use.

In response, the fact that other uses for a laser exist does not make the associated art non-analogous to the instant invention. The method of Abela uses a laser and would direct one of ordinary skill in the art to the laser art, and thus the Beeh reference. Furthermore, a prior art reference is analogous if the reference is in the field of applicant's endeavor (see MPEP 2141.01(a)). Applicant's field of endeavor involves lasers. Beeh teaches using a UV laser and that quartz is the best material to use as a lens for lasers in the UV range. The use of the laser is irrelevant with respect to this feature that is general and applicable to all UV lasers. Furthermore, Beeh is not the only reference relied upon in teaching the quartz tip as Rink also taught this limitation (see page 4, last paragraph of the office action mailed 01/21/2005).

Applicant argues that Beeh does not teach the quartz limitation. In response, Beeh teaches that quartz is the best material for a lens using a laser in the UV range (see col. 4, lines 5-

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8). This teaching is sufficient motivation to use quartz in the instant invention. Furthermore, Rink also taught using a quartz tip, as it is transparent and heat resistant.

Applicant also argues there is a lack of motivation to combine Beeh with the other references because the use of the laser in Beeh is different from that of the other references (page 3, paragraph 2). In response, the basis of this argument is similar to that based on the art being non-analogous and is not persuasive. Lasers use lenses at the tip. The laser art teaches advantages for using quartz lenses in UV lasers. Quartz is transparent to UV light regardless of the use of the laser, providing motivation to use quartz as a material for the lens.

Applicant argues that the teachings of Beeh are not applicable to the instant invention because Beeh is passing a particular wavelength through the lens to expose emulsion on a photoplate and the wavelength is dictated by the sensitivity of the emulsion (see Applicant's remarks at paragraph bridging pages 3-4). In response, regardless of the use or what dictates the wavelength desired, Beeh and Rink teach the utility of a quartz lens for being a transparent, heat resistant, economical means for focus UV light from a laser.

Applicant argues that Beeh does not show, in Figure 3, a quartz lens. In response, the lack of teachings in Figure 3 does not negate the teachings with respect to the use of quartz as a material for a lens in UV lasers as referenced above.

Applicant argues that Beeh and Rink both fail to teach a hollow waveguide. As set forth at page 5 of the office action mailed 01/21/2005, Matsuura taught a hollow waveguide and provided motivation for use in a laser. There is no requirement under 35 USC 103 that any single combination of references teach each and every feature of the rejected claims. Those features not

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taught by Abela in combination with Rink are taught by Abela in combination with Henriksen, Beeh, Rink and Matsuura.

Applicant argues that Rink teaches using quartz fibers in plastic or silicon cladding (page 4, paragraph 5). The relevance of this teaching is not clear as Rink is used based on the teachings with respect to a quartz tip or lens, not the nature of the optical fibers. Applicant similarly argues that Rink teaches away from using quartz fibers. Again, this is not applicable to the quartz chip and, the claims do not require quartz fibers for the laser itself.

Applicant argues that the motivation provided by Rink for using quartz is different from the use of quartz in the instant invention. In response, the different motivation for and use of a product does not overcome the rejection based on Rink teaching use of a quartz lens. Rink discloses properties of quartz that are not specifically noted by Applicant and does not refer to the properties disclosed by Beeh such as being transparent to UV light, however, Rink provides sufficient motivation, especially in combination with Beeh, to use a quartz tip. The quartz provides a heat resistant and a hard protective end tip to the laser. It is standard practice in the art to pass a laser through a lens at the tip of a laser and Beeh and Rink provide motivation to use quartz as a material for the lens.

Applicant argues that Matsuura teaches a hollow aluminum coated waveguide but does not teach the quartz glass chip (page 5, last paragraph). In response, Rink and Beeh taught using the quartz glass chip. The glass quartz chip and the hollow, aluminum coated waveguide are general features of a laser that are design options. Motivation exists in the art, specifically in that applied in the instant rejection, to combine these various features in a YAG laser used to affect a cell as taught by Abela.

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Applicant has also argued that Rink does not suggest coating the quartz chip with a metal. However, it would be an obvious design choice option to coat all but the passageway for the laser beam with a metal to prevent the laser energy from undesirable exit through the sides of the 'chip'. It is well known that aluminum and other metals are useful for this reflective effect as taught, for example, by Rink (col. 3, lines 5-22).

In summary, Abela taught the general method of using lasers to create pores in cells for introduction of genetic material. Henriksen taught the claim limitations regarding laser source and specifications. Matsuura taught the limitations regarding the waveguide. Beeh and Rink taught condensing the laser using quartz glass and that coating the quartz glass with a metal was a means of reflecting the laser. Therefore, the combination of references teaches and provides motivation to combine all limitations of the claims. Motivation and expectation of success is as set forth in the office action mailed 01/21/2005 at page 5, last paragraph-page 6, 2<sup>nd</sup> paragraph.

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***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

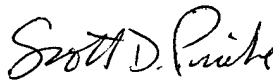
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Valarie Bertoglio whose telephone number is (571) 272-0725. The examiner can normally be reached on Mon-Thurs 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Valarie Bertoglio  
Examiner  
Art Unit 1632

  
**SCOTT D. PRIEBE, PH.D**  
**PRIMARY EXAMINER**